

**INITIAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION**

**REGARDING THE 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11**

(BSC 06/18)

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS:

(Government Code Section 11346.2(b)(1)) requires a statement of specific purpose of each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem the agency intends to address for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.)

General purpose, problem, rationale and benefits: The California Building Standards Commission (CBSC) proposes to carry forward existing amendments from the 2016 California Green Building Standards Code for inclusion in the 2019 California Green Building Standards Code, unless specifically modified below.

Key amendments proposed during this code cycle include:

- Add definitions for water reuse systems.
- Repeal unnecessary references for clean air vehicles, weather protection and moisture control.
- Repeal the majority of the MWELo references in Chapters 5, A5, and 8.
- Update the VOC limits reference standard in the mandatory and voluntary code provisions.
- Amend the MERV ratings in the mandatory provisions and repeal the MERV provisions in the voluntary Tier 1 and Tier 2.

The intent of the code continues to (1) reduce greenhouse gas (GHG) emissions from buildings, (2) promote environmentally responsible, cost-effective, healthier places to live and work and (3) reduce potable water consumption in buildings.

The proposed changes to the green building standards with statewide application will lead to substantial environmental benefits through reduction in the use of energy, water, and raw materials; improved public and building occupant health due to improved indoor air quality; and overall reduced detrimental environmental impacts.

ITEM 1. CBSC Proposes to amend Chapter 5, Section 5.302.1 Definitions.

Agency Statement and Purpose: CBSC proposes to amend Chapter 5 to include new terms in Section 5.302 that pertain to the recycled water building standards adopted into Section 5.305 Water Reuse Systems during the 2016 Intervening Code Cycle. These terms were inadvertently omitted from Section 5.302.1 Definitions; this amendment is editorial and non-substantive with no intended change in regulatory effect.

Rationale:

The terms CONSTRUCTION SITE, DISINFECTED TERTIARY RECYCLED WATER, RECLAIMED (RECYCLED) WATER, and RECYCLED WATER SUPPLY SYSTEM are being added to Section 5.302.1 Definitions for consistency with the recycled water building standards adopted into Section 5.305 Water Reuse Systems during the 2016 Intervening Code Cycle, language which references these terms.

Benefit:

Adding these definitions into CALGreen will aid the local jurisdictions and designers to interpret and understand the proposed code changes.

ITEM 2. CBSC Proposes to amend Chapter 5, Section 5.106.5.3.5.

Agency Statement and Purpose: CBSC proposes to amend Chapter 5, Section 5.106.5.3.5[N] to add the title “Future charging spaces” to section 5.106.5.3.5 [N] and to repeal Notes 1-3.

Rationale:

This section is proposed for amendment to clarify the section applicability by adding a subject title after the code section number and to repeal Notes 1-3. Notes 1-3 are pointers to external reference documents that are no longer needed. These amendments are editorial in nature and there is no intended change in regulatory effect.

Benefit:

Adding the title to the code section will aid the local jurisdictions and designers to interpret and understand the code section. Repealing the notes will minimize confusion from the code users and will simplify the CALGreen Code by removing unnecessary information.

ITEM 3. CBSC proposes to amend and repeal language in sections 5.304.1 through 5.304.5.

Agency Statement and Purpose: BSC proposes to amend and repeal language in sections 5.304.1 through 5.304.5, which reference the mandatory provisions of the Model Water Efficiency Landscape Ordinance (MWELO) developed by the

Department of Water Resources (DWR) and contained within Chapter 2.7, Division 2, Title 23, California Code of Regulations. BSC proposes to amend **Section 5.304.1 Scope** to more generically reference DWR's MWELO for purposes of mandatory landscape irrigation requirements. Sections 5.304.2 through 5.304.5 are proposed for repeal.

Purpose and Rationale:

DWR is currently in the process of updating MWELO in Title 23, CCR, pursuant to [AB 2515 \(Weber, Chapter 576, Statutes of 2016\)](#). However, these regulations will not be adopted by the California Water Commission and suitable for referencing in CALGreen during the 2018 Triennial Code Adoption Cycle. Therefore, BSC is repealing referential pointers that describe requirements for outdoor water use in landscape areas equal to or greater than 500 square feet (Section 5.304.2), outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 square feet (Section 5.304.3), outdoor water use in landscape areas of 2,500 square feet or less (Section 5.304.4), and graywater or rainwater use in landscape areas (Section 5.304.5) because these sections will likely conflict with DWR's update of MWELO in Title 23 once it is adopted. As such, BSC is proposing a much more generic reference to MWELO in **Section 5.304.1 Scope** that directs the code user to the appropriate section in Title 23. Because Title 23 is a mandatory regulation adopted by DWR (to which CALGreen merely references), there is no intended change in the regulatory effect of BSC's pointers. Without amendment, BSC's CALGreen amendments would likely conflict with DWR's updated MWELO regulations in Title 23, which is prohibited by the Administrative Procedure Act [Government Code Section 11349.1(d)(4)].

Benefit:

This proposed change will prevent future conflicts between Title 23 (MWELO) and Title 24 (CALGreen) while continuing to promote awareness and give a voice to MWELO within CALGreen, thereby ensuring consistency to the code user and enforcement by local enforcement agencies.

ITEM 4. CBSC Proposes to amend Chapter 5, Section 5.305 Water Reuse Systems.

5.305.1.1 Outdoor recycled water supply systems [N]. All newly constructed...

5.305.1.2 Technical requirements for outdoor recycled water supply systems [N]. Recycled water supply systems...

Agency Statement and Purpose: CBSC proposes to amend Sections 5.305.1.1 and 5.305.1.2 to add an [N] banner indicating these mandatory sections are applicable to new construction only, as specified.

Rationale:

This section is proposed for amendment to clarify that Sections 5.305.1.1 and 5.305.1.2 are applicable to new construction only, as specified. The [N] banner was inadvertently omitted from the adoption of these regulations during the 2016 Intervening Code Cycle. This amendment is editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding the [N] banner will clarify to the code user that Sections 5.305.1.1 and 5.305.1.2 are applicable to specified newly constructed projects only (i.e. not additions or alternations).

ITEM 5. CBSC Proposes to amend Chapter 5, Section 5.407.1

Agency Statement and Purpose: CBSC proposes to amend Chapter 5, Section 5.407.1 Weather protection to correct a referenced section number and to repeal the reference to the California Energy Code Section 150 (Mandatory Features and Devices).

Rationale:

This section is proposed for amendment to provide the updated code section reference in the California Building Code for weather protection requirements. The repeal of the reference to the California Energy Code Section 150 (Mandatory Features and Devices) is needed since that specific code section, found in the California Energy Code, does not apply to nonresidential occupancies. This amendment is editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding these amendments to referencing the correct code section and to repeal the reference to inaccurate information will aid the code user in properly applying the correct codes which will help avoid confusion between residential and nonresidential code requirements. Additional benefit is derived by simplifying the code to only reference one external code.

ITEM 6. CBSC Proposes to amend Chapter 5, Sections 5.504.4.4 and 5.504.4.6.

Agency Statement and Purpose: CBSC proposes to amend Chapter 5, Section 5.504.4.4 Carpet systems and Section 5.504.4.4.6 Resilient flooring systems, to correct the referenced year for the new CHPS criteria for VOC limits.

Rationale:

These two code sections are proposed for amendments to correct the referenced year from 2012 to 2014 CA-CHPS for the CHPS criteria for VOC limits. The CHPS standard has been recently updated so these sections need to reference the accurate standards to avoid a conflict. This amendment is editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding these amendments to update the appropriate year for the new CHPS criteria for VOC limits standards will aid the code user in properly applying the correct reference standards.

ITEM 7. CBSC Proposes to amend Chapter 5, Sections 5.504.5.3

Agency Statement and Purpose: CBSC proposes to amend Chapter 5, Section 5.504.5.3 Filters to update the Minimum Efficiency Reporting Value (MERV) rating for mechanically ventilated buildings and to amend the “Exceptions” section item 1 to remove the reference to the *California Energy Code*.

Rationale:

Section 5.504.5.3 is proposed for amendment to change the MERV rating from a MERV 8 to a MERV 13. This amendment is necessary to align with the recently approved 2019 Energy Efficiency Standards found in Part 6 *California Energy Code* promulgated by the California Energy Commission which increased the MERV rating from a MERV 6 to a MERV 13. BSC’s proposal to increase the MERV rating in Part 11 for nonresidential occupancies is necessary to maintain consistency and to avoid conflict between Parts 11 and Part 6.

During the California Energy Commission’s 45-day public comment period, BSC provided public comment explaining that Part 11 already had MERV ratings provisions for nonresidential occupancies or MERV ratings since the 2010 Triennial Code Cycle. The Division of the State Architect co-adopted with BSC this code provision during the 2010 Triennial Code Cycle. DSA will have to make a similar amendment to align with the recently adopted 2019 California Energy Code. Additionally, the Department of Housing and Community Development has a voluntary MERV rating provision for residential occupancies in Part 11. HCD will need to make amendments to avoid a conflict between Part 11 and Part 6.

More information about the California Energy Commission’s Initial Statement of Reasons for rulemaking Docket # 17-BSTD-02 may be accessed using the following link:

[California Energy Commission Initial Statement of Reasons](#)

The California Energy Commission’s rulemaking package contained the following Initial Statement of Reason language justifying the MERV increase:

“Increase air filter filtration requirements to a Minimum Efficiency Reporting Value (MERV) of 13, necessary for filtering out the smallest category of potentially harmful particulates. This change includes requiring that certain return grills accommodate a two inch filter depth, to ensure that MERV 13 filters can be installed with little or no impact on overall system performance.

Staff identified a MERV rating of 13 as being effective at filtering out fine particulate matter (PM_{2.5}) while also being available in a one inch form factor with a negligible effect on pressure drop compared to an average filter with the currently required MERV rating of six.

Staff further identified a need to ensure that HVAC systems are designed to accommodate higher MERV filters so that occupants with a need or desire for improved filtration that meet this need by installing such a filter are not inadvertently harming the energy efficiency, lifespan, or overall performance of their system by doing so. Staff found that when higher MERV filters are installed by occupants, they can potentially increase system pressure drop and reduce system energy efficiency – while some 1” MERV 13 filters exist that have comparable pressure drop to 1” MERV 6 filters, this was not true for all MERV 13 filters nor for filters at higher MERV ratings. Staff found that the industry already produces filters with greater surface area specifically to address pressure drop: by increasing filter depth and number of pleats, the total surface area of the filter is increased and the effects on system pressure decreased. Staff found that filters with the same pressure effects as a one-inch MERV 6 filter and higher MERV ratings are broadly available at a two-inch filter depth, increasing the breadth and depth of selections available to consumers. In addition to the above, staff notes that individuals that are not able to meet their air filtration and IAQ needs via their HVAC system would be likely to use a supplementary or stand-alone (i.e., portable) air purifier, with an associated increase in energy use. Providing the ability to install high MERV filters into the building’s HVAC system avoids this unnecessary use of energy.

For these reasons, staff is proposing to raise the requirement for the initial filter installed for HVAC equipment to a MERV of 13, and to require that systems be able to accommodate a two-inch filter so that selection of higher (13 and above) MERV replacement filters does not decrease equipment efficiency. These changes are necessary to ensure that consideration and adoption of envelope requirements is not impeded by indoor air quality concerns, to ensure that selection of higher MERV replacement filters does not impede system energy efficiency, lifespan, or performance, and to avoid increases in energy use that would result from increased use of supplementary or stand-alone (i.e., portable) air filtration and purification devices.”

CBCS's proposal to amend Section 5.504.5.3, "Exceptions" item 1 to remove the reference to the *California Energy Code* is necessary as it was determined by the California Energy Commission that the 2013 Energy Code does not make a distinction at 60,000 BTU/hr except in relation to process loads (and, even then, only for fan controls, not for filtration). Additionally, Part 6 was reviewed for any references that specify cfm airflow, and they could not find a provision with a matching threshold.

Thus, the Energy Commission's recommendation is to strike the reference to the Energy Code and leave the rest of the exception intact. This amendment is editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding these amendments to Section 5.504.5.3 maintains consistency and avoids conflict between Part 11 and Part 6 code language for MERV ratings. The amendment to Exception 1 will assist the code user by eliminating a code reference that is no longer applicable.

ITEM 8. CBSC Proposes to amend Chapter 5, Section 5.505.1.

Agency Statement and Purpose: CBSC proposes to amend Chapter 5, Section 5.505.1 Indoor moisture control to correct a referenced section number and to repeal the verbiage that states "...not applicable to low-rise residential occupancies..."

Rationale:

This section is proposed for amendment to provide the accurate code section in the California Building Code for Ventilation requirements. The repeal of the verbiage that states "...not applicable to low-rise residential occupancies..." is needed since that specific verbiage does not apply to Nonresidential occupancies and is superfluous. This amendment is editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding these amendments to referencing the correct code section and to repeal the reference to inaccurate information will aid the code user in properly applying the correct codes which will help avoid confusion between residential and nonresidential code requirements.

ITEM 9: BSC proposes to repeal its non-regulatory reprint of MWELD Appendix D in CALGreen Chapter 8.

Agency Statement, Purpose, and Rationale:

BSC proposes to repeal its non-regulatory reprint of MWELD Appendix D in CALGreen Chapter 8 to avoid conflicts with any changes made by DWR during its Title 23 rulemaking process [as required by Health and Safety Code Section

18930(a)(1)]. It is important to note that, upon adoption by the California Water Commission into Title 23, BSC may be able to reprint an updated version of Appendix D into Chapter 8 of CALGreen during the 2019 Intervening Code Cycle, if deemed appropriate.

Benefit:

This proposed change will prevent future conflicts between Title 23 (MWELo) and Title 24 (CALGreen) while continuing to promote awareness and give a voice to MWELo within CALGreen, thereby ensuring consistency to the code user and enforcement by local enforcement agencies.

ITEM 10. CBSC Proposes to amend Appendix Chapter A5, Sections A5.504.4.7 and A5.504.4.7.1

Agency Statement and Purpose: CBSC proposes to amend Appendix Chapter A5, Sections 5.504.4.7 and 5.504.4.4.7.1 Resilient flooring systems Tier 1 & 2 respectively to correct the referenced year for the new CHPS criteria for VOC limits.

Rationale:

These two code sections are proposed for amendments to correct the referenced year from 2012 to 2014-CA for the CHPS criteria for VOC limits. The CHPS standard has been recently updated so these sections need to reference the correct standards to avoid a conflict. These amendments are editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding these amendments to provide an update to the appropriate year for the new CHPS criteria for VOC limits standards will aid the code user in properly applying the correct reference standards.

ITEM 11. CBSC Proposes to amend Appendix Chapter A5, Section A5.504.4.8.

Agency Statement and Purpose: CBSC proposes to amend Appendix Chapter A5, Section A5.504.4.8 Thermal insulation, Tier 1 to correct the referenced year for the CHPS criteria for VOC limits found in item 2.

Rationale:

CBSC is proposes to amend Section A5.504.4.8 Thermal insulation, Tier 1. The amendments to correct the referenced year from 2009 to 2014-CA for the CHPS criteria for VOC limits found in item 2 is needed to reference the correct standard. These amendments are editorial and non-substantive with no intended change in regulatory effect.

Benefit:

Adding these amendments to provide an update to the correct year for CHPS criteria VOC limits standards will aid the code user in properly applying the correct reference standards.

ITEM 12. CBSC Proposes to amend Appendix Chapter A5, Section A5.504.5.3.1 and A5.504.5.3.1.1

Agency Statement and Purpose: CBSC proposes to amend Appendix Chapter A5, Section A5.504.5.3.1 Filters, Tier 1 and A5.504.5.3.1.1 Filters, Tier 2 by repealing these voluntary code provisions.

Rationale:

Currently Section A5.504.5.3.1 Filters, Tier 1 requires a MERV rating of 11 and Section A5.504.5.3.1.1 Filters, Tier 2 requires a MERV rating of 13. These two code provisions are proposed for repeal because the California Energy Commission recently approved the 2019 Energy Efficiency Standards found in Part 6 *California Energy Code* which increased the MERV rating from a MERV 6 to a MERV 13 and there would be a direct conflict with the MERV ratings of both Sections A5.504.5.3.1 Tier1 and A5.504.5.3.1.1 Tier 2 which are set at MERV 11 and MERV 13 respectively. The new Part 6 MERV 13 requirement makes the CALGreen Tier 1 and Tier 2 obsolete. See Item 7 above for the purpose and rationale justifying the mandatory regulation changes for the Energy Commission's MERV rating increase from 6 to 13.

Benefit:

Repealing these two code provisions will avoid conflicts in code between Part 11 and Part 6 and aide the code user. Since the Energy Commission is making MERV 13 mandatory and BSC is aligning with them, it makes the voluntary CALGreen Tier 1 and Tier 2 MERV ratings obsolete.

ITEM 13. CBSC Proposes to update Appendix Chapter A5, Section A5.602, A5.602.1, and A5.602.2.

Agency Statement, Purpose, and Rationale: CBSC proposes to amend Appendix Chapter A5, Sections A5.602 Mandatory, A5.602.1Tier 1 and A5.602.2 Tier 2 CALGreen Verification Guidelines Checklists to code Sections 5.304, 5.305.1.1 and 5.305.1.2.

These sections (checklists) are proposed to be amended by adding code Sections 5.305.1.1 and 5.305.1.2 to these checklists to correct a publication error that occurred during the 2016 CALGreen Intervening Code Cycle. These sections were added to Chapter 5 as mandatory measure, but where inadvertently left out of the checklists. These amendments are editorial and non-substantive with no intended change in regulatory effect.

Additionally, BSC proposes to repeal references to outdoor water use within these checklists in order to align with the repealed language in Section 5.304.

Benefit:

Adding these amendments to the checklists will aid the code user in properly applying the correct mandatory measures and will add uniformity and consistency within the CALGreen Code by having the code sections match between the code language and the respective checklists. Additionally, repealing the references to mandatory MWELo provisions will prevent future conflicts between Title 23 (MWELo) and Title 24 (CALGreen) while continuing to promote awareness and give a voice to MWELo within CALGreen, thereby ensuring consistency to the code user and enforcement by local enforcement agencies.

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

(Government Code Section 11346.2(b)(3)) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

For proposed MERV filter ratings increases refer to Item 7 in this document for supporting documentation and the following links:

[California Energy Commission Initial Statement of Reasons](#)

[California Energy Commission Form 399](#)

[California Energy Commission Form 399, Attachment](#)

STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:

(Government Code Section 11346.2(b)(1)) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.)

California's building standards codes have historically been a mix of performance and prescriptive provisions and reference standards. This proposed code language continues this practice, such that wherever possible, a performance option is included to provide flexibility to the code user.

CONSIDERATION OF REASONABLE ALTERNATIVES

(Government Code Section 11346.2(b)(4)(A)) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

No alternative to this responsive action were considered.

The modifications that CBSC proposes during this triennial code cycle are intended to clarify and correct as necessary the provision of the mandatory and voluntary code being used in California. The amendments are responsive to comments received by other state agencies.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

(Government Code Section 11346.2(b)(4)(B)) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

No alternatives were identified to lessen the adverse impact on small business. These proposed amendments are mostly editorial in nature and align with current laws and regulations found in the CALGreen code.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

(Government Code Section 11346.2(b)(5)(A)) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business)

BSC has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states. The proposed CALGreen code changes are mostly editorial in nature.

ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION

(Government Code Sections 11346.3(b)(1) and 11346.5(a)(10))

The California Building Standards Commission has assessed whether or not and to what extent this proposal will affect the following:

The creation or elimination of jobs within the State of California.

These regulations will not affect the creation or elimination of jobs within the State.

The creation of new businesses or the elimination of existing businesses within the State of California.

These regulations will not affect the creation or elimination of businesses within the State.

The expansion of businesses currently doing business with the State of California.

These regulations will not affect the expansion of businesses currently doing business within the State.

The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.

These regulations will update and clarify mandatory building standards, which will provide increased protection of public health and safety, worker safety and the environment.

ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS

(Government Code Section 11346.2(b)(5)(B)(i)) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

For proposed MERV filter ratings increases refer to Item 7 of this document and for estimated cost of compliance herein.

The California Energy Commission (CEC) made a change in air filtration requirements to improve indoor air quality for the better health of building occupants. The effect on Nonresidential occupancies will be an increase in air filter/grill costs of \$0.0071 per square feet for new construction. The cost per square foot increase was provided to BSC by the Energy Commission; refer to BSC's Attachment A and B of the Form 399.

The amendments provide clarity and regulatory consistency for the code user and promote healthier indoor environments.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

(Government Code Section 11346.2(b)(6)) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

There are no proposed regulations that duplicate or conflict with federal regulations. There are no federal regulations addressing this same subject matter.